

**IN THE
SUPREME COURT OF MISSOURI**

No. SC 83859

SOUTHWESTERN BELL TELEPHONE COMPANY,

Appellant,

v.

DIRECTOR OF REVENUE,

Respondent.

**On Petition for Review from the
Missouri Administrative Hearing Commission
Hon. Willard C. Reine, Commissioner**

BRIEF OF APPELLANT

**BRYAN CAVE LLP
Juan D. Keller, #19864
B. Derek Rose, #44447
One Metropolitan Square
211 North Broadway, Suite 3600
St. Louis, Missouri 63102-2750
Telephone: (314) 259-2000
Facsimile: (314) 259-2020**

**Edward F. Downey, #28866
221 Bolivar Street, Suite 101
Jefferson City, Missouri 65101
Telephone: (573) 556-6622
Facsimile: (573) 556-6630**

Attorneys for Appellant

TABLE OF CONTENTS

TABLE OF AUTHORITIES	4
JURISDICTIONAL STATEMENT	6
STATEMENT OF FACTS	7
A. Introduction.....	7
B. Description of Telephone Technology	8
1. Analog vs. Digital Signals.....	8
2. Voice Frequency Systems vs. Carrier Frequency Systems	10
C. General Description of Telephone Network Equipment	11
1. Loop Facilities (outside plant equipment)	12
2. Central Office Switching.....	15
3. Interoffice Trunking Facilities	18
4. Signaling System Seven (SS7).....	20
5. Miscellaneous Equipment	21
D. Description of Basic Local Telephone Service.....	21
E. Bell's Vertical Services	23
1. Description of Caller ID	24
2. Description of Other Vertical Services Dependent upon SS7 Network.....	25
3. Description of Other Services Requiring Switching Memory.....	27
4. Description of Billing and Miscellaneous Vertical Services	28
F. Bell's Accounting and the Claim for Refund	29

G. The Commission’s Decision	30
STATEMENT OF THE ISSUES	32
STANDARD OF REVIEW.....	33
POINT RELIED ON.....	34
ARGUMENT.....	36
Introduction	36
A. Bell Manufactures Basic and Vertical Telephone Services	38
1. Elements of the Manufacturing Exemptions.....	38
2. The Production of Basic Telephone Service is Manufacturing	40
(a) <i>Bridge Data</i> Controls	40
(b) The Commission’s Reliance on <i>GTE</i> is Misplaced.....	42
3. The Production of Vertical Services is Manufacturing	45
4. Each Purchase of Machinery & Equipment is Part of Bell’s Integrated Telecommunications System and is Used Directly to Provide Both Basic and Vertical Services in Final Form for Bell’s Customers	47
B. The Manufacturing Exemptions do not Require Taxpayers to Sell Manufactured Products During the Tax Periods When the Machinery & Equipment is Purchased.....	50
CONCLUSION.....	52
CERTIFICATE OF SERVICE.....	54
CERTIFICATE REQUIRED BY SPECIAL RULE 1 (c).....	54

TABLE OF AUTHORITIES

Missouri Cases

Bridge Data Co. v. Director of Revenue,

794 S.W.2d 204 (Mo. banc 1990) 36, 40-42, 45, 47

Concord Publishing House, Inc. v. Director of Revenue,

916 S.W.2d 186 (Mo. banc 1996)33, 38-39, 45, 47- 48, 51

DST Systems, Inc. v. Director of Revenue,

43 S.W.3d 799 (Mo. banc 2001)45, 47

Floyd Charcoal Company, Inc. v. Director of Revenue,

599 S.W.2d 173 (Mo. 1980)..... 37, 47-48

GTE Automatic Electric v. Director of Revenue,

780 S.W.2d 49 (Mo. banc 1989) 42-45

Heidelberg Central, Inc. v. Director of Revenue,

476 S.W.2d 502 (Mo. 1972).....43

Hogan Transports, Inc. v. Director of Revenue,

No. 98-1305 RV (Mo. Admin. Hrg. Comm. 1999).....38, 52

International Business Machines Corporation v. Director of Revenue,

958 S.W.2d 554 (Mo. banc 1997)37, 42, 45, 47

Jackson Excavating v. Administrative Hearing Commission,

646 S.W.2d 48 (Mo. 1983)..... 8, 43-44

<i>K & A Litho Process, Inc. v. Director of Revenue,</i>	
653 S.W.2d 195 (Mo. banc 1983)	43
<i>Noranda Aluminum, Inc. v. Missouri Department of Revenue,,</i>	
599 S.W.2d 1 (Mo. 1980).....	48
<i>West Lake Quarry & Material Company, Inc. v. Schaffner,</i>	
451 S.W.2d 140 (Mo. 1970).....	43
<i>Wetterau, Inc. v. Director of Revenue,</i>	
843 S.W.2d 365 (Mo. banc 1992)	52
<i>Zip Mail Services, Inc. v. Director of Revenue,</i>	
16 S.W.3d 588 (Mo. banc 2000)	33

Missouri Constitution

MO. CONST. art. V, §3.....	6
----------------------------	---

Missouri Statutes and Regulation

Section 144.020.1(2).....	36
Section 144.020.1(4).....	45
Section 144.030.2(4).....	6, 30, 34, 36, 38
Section 144.030.2(5).....	6, 30, 34, 36, 38
Section 144.615(3).....	6, 34, 36, 38
Section 621.189	34, 36
Section 621.193	33, 34, 36
12 CSR 10-3.320(4)(B)(1).....	52

JURISDICTIONAL STATEMENT

This appeal involves the construction of revenue statutes §§144.030.2(4)¹ and 144.030.2(5) (“Manufacturing Exemptions”), incorporated into the Use Tax Law by §144.615(3). The primary issue is whether Southwestern Bell Telephone Company’s (“Bell”) purchases of machinery and equipment in the second quarter of 1992 were exempt from taxation because the machinery and equipment were used in manufacturing basic and vertical telephone services, all of which are “products” subject to sales tax.

The Director of Revenue and the Commission denied Bell’s refund claims. The Commission concluded as a matter of law that while basic and vertical telephone services were “products” subject to sales tax, they were not “manufactured” pursuant to the statutes at issue. The Commission also concluded as a matter of law that taxpayers are not entitled to the Manufacturing Exemptions unless, during the tax periods when the machinery and equipment was purchased, the manufactured products were actually sold. The effect of this holding is that the Manufacturing Exemptions apply only to machinery and equipment installed during tax periods that products are actually sold.

This Court has exclusive jurisdiction over this appeal pursuant to Article V, §3 of the Missouri Constitution.

¹ Unless otherwise noted, all statutory citations are to the Revised Statutes of Missouri of 1986.

STATEMENT OF FACTS

A. Introduction

Bell seeks a refund of \$601,406.46 in use tax remitted during the second quarter of 1992 (“Tax Period”) on the purchases of machinery and equipment (“Machinery & Equipment”) used to produce basic and vertical telephone products. During the Tax Period, Bell collected and remitted \$11,011,655.48 in Missouri sales tax on its sales of basic and vertical telephone products (Tr. 43-63; Ex. 3). Generally, the basic telephone product is produced by a series of conversions of electrical signals that are routed back and forth between callers on the system; it is not the transmission of sounds. Similarly, vertical telephone products are produced by creating electrical signals that are then routed to customers or used directly by Bell to service customers. For example, Bell’s Machinery & Equipment take electronic signals, create from them caller ID signals, and route those to customers subscribing to that service so that those signals can then be converted into letters and numbers to display a caller’s name and number. On the other hand, Bell’s Machinery & Equipment create certain signals that enable its telephone system to reject certain incoming calls for customers subscribing to Bell’s call rejection service. As described in significant detail below, Bell used the Machinery & Equipment to manufacture basic and vertical telephone products. In other words, it changed raw electrical signals into products with a different use, identity, and value.²

The record is voluminous. The bulk of the testimony and exhibits concerned technical aspects of producing the basic and vertical products (Tr. 239-664), and was provided by an electrical engineer

² *Jackson Excavating Co. Administrative Hearing Commission*, 646 S.W.2d 48, 51 (Mo. 1983).

with almost 40 years of experience (Tr. 241). The Director's technical expert witness heard all of this testimony, but did not testify because that "technical information [was] very correct" (Tr. 682). Thus, the description of Bell's production of the products is extensive and highly technical, but the facts are undisputed.

B. Description of Telephone Technology

1. Analog vs. Digital Signals

Analog and digital technologies may be applied to loop facilities, switching machines and trunking facilities. Both terms describe methods of converting sound or other information for routing electrical signals through the network (Tr. 373-378; Exs. 12, 15). When a person talks into a telephone set, the voice sound consists of vibrations through the air, and the sound is converted by basic telephone service to an electric analog signal (Tr. 533-538). Analog signals are subject to three natural impairments: loss, noise and distortion. As an electrical signal travels the length of a pair of copper wires, the signal is reduced in strength due to the resistance of the wires. This loss of signal strength is reflected in reduced volume of the voice signal. Thus, there is a practical limit to the distance that an analog signal can be routed without amplification (Tr. 373-378; Ex. 12, 15).

When an analog voice signal is amplified, all additional noises on the circuit are amplified, even if unrelated to voice vibrations. Noise is caused, among other things, by unwanted electrical signals that interfere with the informational signal. These unwanted signals come from a variety of sources, including power cables near telephone lines, electric currents in the earth or the air, or from other wires in the same telephone cable. If an analog signal is amplified and noise is strong, the signal may actually be changed so much that the information changes, a situation called distortion (Tr. 373-378; Exs. 12, 15).

A digital telephone system generates signals made up of a fixed number of pulses of a set size. For instance, many systems use eight pulses (also called bits) to represent one signal. Each of the eight bits is either on (when a pulse is present) or off (no pulse is present). Since these pulses are still electrical signals, there remains a loss of signal over copper wire. However, since the signal has a specific size and shape, the signal can be regenerated rather than amplified, thereby making it possible to eliminate the noise and distortion common in an analog system (Tr. 373-378; Exs. 12, 15).

Continuous analog signals can be converted into digital pulses by sampling the analog signal and coding that sample into an eight-pulse signal. When a person speaks, the listener does not listen to every sound that is made, but listens to enough of a reproduction to hear the message. By sampling an analog voice signal once every eight thousandths of a second, it is possible to route and reconstruct samples to sound similar to the original; they are not identical, however (Tr. 373-378; Exs. 12, 15).

2. Voice Frequency Systems vs. Carrier Frequency Systems

Communication signals are carried on loop and trunk facilities either at voice frequency or by a carrier system. Voice frequency telephone systems take the analog signal generated by the normal telephone set, place it on a routing path, amplify it as necessary, and convert it back into sound in another telephone set. This system requires one physical routing path per conversation. That path is usually a pair of copper wires (Tr. 373-378; Ex. 12).

Current carrier telephone systems generally use digital technology to carry multiple communications on a single physical routing path, thereby increasing capacity. Digital transmission systems take sequential high speed samples of a number of conversations, encode them with a message identifier, route samples like a series of boxcars on a train, and reassemble samples to form messages.

The sampling process is like a movie. A series of still pictures is moved by the projector lens fast enough to give the appearance of continuous motion. Digital carrier systems sample sound and route it fast enough that, when reassembled, it appears to be a continuous signal. Digital carrier systems operate on either copper or fiber facilities (Tr. 372-378; Ex. 12). They produce substantially more communications than basic analog electric systems, increasing the flow of information from the equivalent of eight bits on the analog system to a minimum of 45 million bits on a digital system using the glass fiber mechanisms (Tr. 390-394).

C. General Description of Telephone Network Equipment

Bell's telecommunications network is a multi-purpose, mixed-use system capable of creating and routing voice and data information for local and intrastate service, and for intrastate and interstate access to long distance carriers. Bell's network is an integrated system that provides the entire menu of products subject to sales tax (basic service and numerous vertical services) to its customers (Tr. 491, 504). As a consequence, Bell never buys Machinery & Equipment to provide a distinct additional feature of service; Machinery & Equipment is purchased to provide all services. In fact, none of the services can be provided in isolation (Tr. 508-510).

The network is composed of four basic building blocks: loop facilities, central switching offices, interoffice trunking facilities, and signaling system seven ("SS7") (Tr. 299-438; Exs. 12-15).

Loop facilities (also called outside plant equipment) are the communications paths that connect a customer's location to a central switching office or to another transmission facility. The loop is typically a pair of copper wires, but it can also be a pair of glass fiber lightguides (Tr. 374-5; Ex. 12).

A central switching office is the hub of the loop facilities for a geographical area known as a wire center. The central office contains switching machines that connect loop facilities to one another or

to a trunk to another central office, as well as the distributing frame that allows any loop facility in the wire center to be associated with any line termination available in the switching machine. In addition, the central office provides the power to operate the telephones connected to the copper loop facilities by converting alternating current electricity (“AC”) obtained from the local power company to direct current electricity (“DC”) to operate the telephone network (Tr. 298-9, 301, 349-373; Exs. 14, 25, 26).

Interoffice trunking facilities are communication paths between the trunking machines. In a town served by a single switching machine, trunks are usually used for access to long-distance carriers or for operator services. In large cities, local trunks connect customers through different central offices in the city. Trunking facilities may be simple copper wires, but they are most often electronic carrier systems connected to copper wires or fiber optic telephone systems (Tr. 415-418; Exs. 12, 26).

“SS7” is a production component that provides modern basic telephone service, and is required to produce the new vertical products. SS7 is an overlay network that allows the switching machines to communicate with each other on a path different from that which is used to provide basic telephone services to customers (Tr. 300, 418-423, 498-505, 510-511, 524-525, 626, 629-632, 652-654; Exs. 11,13, 26, 28-30).

1. Loop Facilities (outside plant equipment)

As discussed above, loop facilities (also called outside plant equipment) are the communications paths that connect a customer’s location to a central switching office or to another transmission facility. Feeder loop facilities start at the central office location and proceed toward large concentrations of customer locations. The forecast of customer requirements in the area to be served determines the size and type of feeder facilities (Tr. 372-387; Ex. 13). Prior to 1970, all feeder facilities were copper

cables as large as 4,800 pairs each. Cable remains the most economic choice for locations very close to the central office (Tr. 372-387; Ex. 13).

Feeder facilities may be placed in conduit, buried or placed on poles. Most cables leave the central office in conduit. In some cases, the cable will leave the conduit, be buried for a distance, and then brought above ground and placed on poles. City ordinances and weather often mandate how loop facilities are placed. Feeder facilities are usually accessible only at the central office and at the interconnection of the feeder and the distribution facilities (Tr. 372-387; Ex. 13).

Fiber optic systems, also known as Lightwave Guide Systems, are also used as feeder facilities in conjunction with pair gain devices (Tr. 372-387; Ex. 13). Pair gain devices were developed to allow growth on existing feeder cables and to reduce the cost of placing new cables. A pair gain device allows service of up to 96 customers on 10 pair of wires. The actual capacity of each system is determined by the types of services ordered by the customers being served (Tr. 372-387; Exs. 12-13).

Pair gain devices are grouped together to serve an area known as a Carrier Service Area (“CSA”). The CSA is a concentration of customer locations that are connected by distribution cables to the pair gain devices. The pair gain devices are located near the CSA in a weather-proof cabinet, a small building or an underground vault. All of these locations require a source of commercial power, and the devices are provided with batteries for emergencies (Tr. 372-387; Exs. 12-13).

Distribution facilities are the portion of a loop facility located between the feeder facilities and the drop wire. A drop wire is a copper cable containing from two to 25 pair of wires and is the connection with the customer’s location. The drop wire may be buried or aerial from the pole to the building (Tr. 372-387; Exs. 12-13). Distribution facilities are nearly always copper cables and are smaller in size than the cables used as feeder cables. Several distribution facilities typically connect to a

single feeder facility. Distribution cables are buried or aerial, and have a maximum length of 12,000 feet. The size of these cables varies from 25 to 3,600 pair as needed to serve the customers of the CSA (Tr. 372-387; Exs. 12-13).

A Feeder/Distribution Interface (“FDI”) is usually a metal cabinet mounted on a concrete pad that house terminal blocks that allow for pairs of feeder wires to be cross-connected to pairs of distribution wires (Tr. 372-387; Exs. 12-13).

Generally, when the digital loop carrier system is used, electronic equipment in the central office and in a remote terminal located at the end of the feeder facility must be added. The remote terminals are located in above ground, weather-tight, metal cabinets in pre-constructed concrete huts, or in underground concrete vaults. Each enclosure is equipped with power supplies and batteries, and, when necessary, air conditioning (Tr. 372-387; Ex. 13).

The distribution facilities from the FDI to the customer’s premises are pairs of copper wires. The customer lines from the central office switch are cross-connected to an input in the digital loop carrier central terminal that combines 24 individual lines onto a single high-speed path that requires two pairs of wires to the remote terminal. At the remote terminal, the high-speed path is converted back into 24 individual lines. These lines are cross-connected to the copper wires in the distribution facilities for transport to the customer’s premises (Tr. 372-387; Ex. 12).

As described below, the digital loop carrier system converts the analog signal from a regular telephone to a digital signal, and then places 24 individual signals onto a single circuit that uses only two pairs of wires between the digital loop carrier central office terminal and the remote terminal (Tr. 372-387; Ex. 12).

2. Central Office Switching

A central office switching machine usually is comprised of line terminations (line ports), trunk terminations (trunk ports), a switching matrix and a control system that provides the ability to have multiple features associated with lines and trunks (Tr. 314-371; Ex. 14). Each digital central office switch has multiple switch modules containing the line and trunk ports that provide access to the switch. The local loops from individual customers are terminated on line ports. Trunks to other central offices, interexchange carriers and other providers of telephone service are connected to the trunk ports. These ports provide any necessary conversion of a signal from analog to digital necessary for the type of service being provided. The line and trunk ports also transmit signals necessary for call completion such as off-hook, audible ringing and power ringing (Tr. 314-371; Ex. 14).

Each switch module contains a processor that allows it to perform common functions such as the provision of dial tone and the collection of dialed digits. The processor is capable of completing simple calls between ports located in the same switch module, but it must communicate with the central processor to complete calls to another switch module or for the activation of complex features (Tr. 314-371; Ex. 14).

For instance, if a customer line attached to a line port in Switch Module A calls a customer line attached to a line port in Switch Module B, the processor in Switch Module A recognizes the customer's signal for service, provides dial tone, collects the dialed digits and determines that the called line is not located within the switching module. The processor generates a signal on a signal link to a Time Division Switch. A Signal Switch will provide a connection to the central processor. The central processor will determine the location of the called line and send a signal back through the Signal Switch to both the calling and called switch modules giving the proper instructions for completion of the call. A Time Division Multiplexing Switch will then connect the voice links from the switch module together.

Upon completion of the call, similar signals will be sent to tell all portions of the switch to disconnect the call. Customer dialed digits that are designed to activate features of the switch will also cause signals to be transmitted from the switch module through the Signal Switch to the central processor to receive instructions for activation of the feature (Tr. 314-371; Ex. 14).

There are three generations of switching technology used to provide service to Bell's customers: analog electronic switches, digital electronic switches, and remote switching systems (Tr. 314-371; Ex. 14). The first electronic switching system ("ESS") central office was installed in 1969. Installation of ESS machines continued until 1984. At the end of 1992, approximately 61% of Bell's Missouri access lines were served by ESS machines (Tr. 314-371; Ex. 14).

The ESS switch is a stored program controlled machine. These analog switches have a digital computer controller. The computer controller allows the introduction of many new features for customers, and greatly improved maintenance features. Additional features are often added by changing the software program that controls the switch. This flexibility has allowed the capacity and capabilities of these switches to grow as customers' needs changed (Tr. 314-371; Ex. 14).

Digital switching technology was first installed in 1981. At the end of 1992, approximately 39% of Bell's Missouri access lines were served by digital switching machines (Tr. 314-371; Ex. 14).

A digital switch is a stored program controlled device with self-diagnostic maintenance features and a "plug-in" apparatus that significantly reduces technical work time. A full range of customer features is available to be installed on all models of digital switches in Bell's customer territory (Tr. 314-371; Ex. 14).

Remote switching systems offer an economical method of providing stored program controlled technology in small, densely populated areas within a large exchange or serving a smaller exchange that

is close to a larger office. A remote switch module is connected by a data link to the central processor of a host switch. This data link allows the remote switch module to share the capabilities of the host switch without duplicating all of the host switch control systems. Remote switches may be served by an ESS host or a digital host switch (Tr. 314-371; Ex. 14).

3. Interoffice Trunking Facilities

Interoffice trunking facilities are the communication paths between switching machines.

Trunking facilities may be simple copper wires, electronic carrier systems or fiber optic lightwave guides (Tr. 314-371; Ex. 12).

Copper wires may be used alone for distances of less than four miles. For greater distances, repeaters in the cable between the offices are necessary. Each pair of wires can provide one communication path although four wires are sometimes used for one path. Trunks of this type can carry analog or digital signals; however, the maximum digital capacity is about 56 kilobits per second (Tr. 314-371; Ex. 12).

The first digital carrier system in Missouri was the T-1 carrier installed in 1964 as an interoffice trunk facility in multi-office cities, and it is now used by most trunk facilities. The T-1 system transmits 24 voice channels on two pairs of copper wires. T-1 repeaters are usually placed in manholes or buried with the cables (Tr. 314-371; Ex. 12).

A lightwave guide system consists of several parts. The lightwave guide is an optical fiber made of special glass that provides a low loss path for the transmission of optical signals. Although light normally travels in a straight line, the fiber is designed to contain the light signal so it can be bent and guided from one location to another. The fibers can transmit a light signal 30 miles without the need for repeaters or regenerators. One pair of fibers is required for each system (Tr. 314-371; Ex. 12). A light

source and a light detector are also required to transmit information. Typical devices used today as light sources in fiber optic systems include the semiconductor laser and the light emitting diode (Tr. 314-371; Ex. 12). A device is also required to convert the original electrical signals to light signals, and at the receiving end, convert the light back to electrical signals. Since light has two natural states, on and off, digital transmission systems are used (Tr. 314-371; Ex. 12).

It is necessary to combine original signals to place a large number of communication channels on a lightwave guide system (also called multiplexing). “T-carrier” technology is used for the initial stage of multiplexing and the “T-1” digital signals are combined in ever larger amounts before the signal is converted to light signals. The optical transmission systems first used by Bell could combine 672 voice channels onto one fiber pair. Current Bell systems place 64,512 voice channels on a single fiber pair. Working models of systems capable of placing over 290,000 conversations on a fiber pair have been demonstrated. Thus, with only a modification or replacement of electronics, fiber pairs can carry more traffic (Tr. 314-371; Ex. 12). At the receiving end, the optical signal must be converted to an electrical signal and then de-multiplexed (Tr. 314-371; Ex. 12).

4. Signaling System Seven (SS7)

SS7 is a set of national standard network protocols and equipment used to transfer signals in a telecommunications network. SS7 is necessary to provide products beyond the basic telephone service (Tr. 652-654). Signaling is the communication of control information between the elements of a communication network (Tr. 314-371; Ex. 12).

A signaling system may be an “in-band” signaling system, where signals are transmitted on the same path used for transmitting voice or data communications, or an “out-of-band” signaling system, where signals are transmitted on a separate path from the one used for transmitting voice or data communications. SS7 is an out-of-band signaling system (Tr. 314-371; Ex. 12).

There are three primary elements of SS7: the Signal Transfer Point (“STP”), signaling links, and the Service Switching Point (“SSP”). An STP is a packet switching device that provides signaling distribution for the network. An SSP is a central office or tandem switching machine equipped to process SS7 signals. The transmission paths that connect SSPs to STPs and STPs to other STPs are called signaling links (Tr. 314-371; Ex. 12). With SS7, in addition to the voice trunk facility, there is a digital link from each central office. All call setup information is transmitted by the SS7 signaling system rather than on the voice trunk. Consequently, additional data can be sent for manipulation (and production of the newer products described below) even while the call is in progress (Tr. 314-371; Ex. 12).

Bell installed an SS7 network throughout Missouri before 1992 and has continued to expand its capacity since that time (Tr. 314-371, 626-655; Ex. 12).

5. Miscellaneous Equipment

Bell also uses Machinery & Equipment in its Pay Telephone Exchange Access Service (“PTEAS”). PTEAS is a telecommunications service utilizing any coin, coinless, credit card reader or cordless instrument that can be used by the members of the general public, or business patrons, employees or visitors of the premises where pay telephone service is installed, provided that the user pays for local or toll calls from such instrument on a per call basis. Telephones located in a hotel or motel room are not considered PTEAS (Ex. 15; Tr. 640).

D. Description of Basic Local Telephone Service

A call is initiated, directed and terminated by a series of electronic signals that are exchanged by the customer and the network machinery. When the customer lifts the receiver of his phone, current flows in the pair of wires connecting the customer to the central office switch. The switch recognizes the current flow as a request for service and signals that it is ready to provide service by returning a dial tone. The customer then signals the machine address for the party it wishes to call in the form of a telephone number. If the customer has a rotary phone, the signal is transmitted as a series of electrical pulses. If the customer has a touch-tone phone, each digit dialed transmits a unique combination of two tones that is recognized by the central office switch as individual numbers. The address information that the customer enters into the machine is not delivered to the called customer (Tr. 314-371; Ex. 14).

The switch analyzes the digits to determine the proper routing of the call. On a local call, the first three digits indicate the central office switch serving the called customer and the last four digits indicate the specific called customer. If the called customer is served from a switch different from that of the calling customer, the routing information will indicate the machine address of a group of trunks that connect the two switches together (Tr. 314-371; Ex. 14).

Additionally, the originating switch sends a data message to the terminating switch using the SS7 signaling system. This message provides the called and calling numbers, and the trunk address for the call (Tr. 314-371; Ex. 14). The terminating switch uses the called number to determine the location of the called customer line on the switch and checks to see if the line is currently in use. If in use, it sends a busy signal back to the calling customer to indicate that no further action will be taken by the network. If the line is idle, the terminating switch applies ringing current to the called line to activate the alerting device in the called telephone. At the same time, the switch sends an audible ringing signal to the called customer's phone. When the called party answers the phone, a voice connection is established between the two phones (Tr. 314-371; Ex. 14).

When digital switches are used for the voice connections, the analog signal created by a person when talking into a telephone set is converted into digital pulses by sampling the analog signal and coding the sample into an eight pulse signals once every eight thousandth of a second. The location at which the transformation takes place is dependent on the type of loop technology used. With copper loops, the conversion takes place at the central office. If loop electronics are used, the conversion takes place in a field location between the customer's premise and the central office. Prior to delivery of the signal into the other telephone set, the digital signal must be reconverted into an analog signal to be heard by the human (Tr. 373-378; Exs. 12, 15).

E. Bell's Vertical Services

In addition to basic local telephone service, Bell offers several additional products ("vertical services") to its customers (Tr. 174-175, 439-475; Ex. 31). Bell offers the following vertical services to its customers: Bill Plus, Customer Billing Report, Detailed Billing Local Measured Service, CABS Bills on Floppy Disk, Caller ID, Anonymous Call Rejection, Auto Redial, Call Blocker, Call

Forwarding, Selective Call Forwarding, Remote Access to Call Forwarding, Call Return, Call Trace, Call Waiting, Priority Call, Speed Call, and Three Way Calling.

All services provided by Bell to its customers in Missouri are subject to approval by the Missouri Public Service Commission (“PSC”) (Tr. 502). The process of developing a product for approval by the PSC begins with the formation of a concept and the development of that concept through a business plan estimating the costs of developing the service and the potential revenue to be derived therefrom. Bell must then design the product and test it using “friendly users” to identify and correct any bugs in the service. The equipment and machinery is then put into production and instruction manuals developed. At that point, Bell would file a tariff with the PSC and go through a series of hearings (Tr. 446-447).

The time frame to develop a new product and have the PSC approve it can range from months to years (Tr. 447). The PSC requires that once it approves a product, the entity must offer the product within a limited time, usually 120 days (Tr. 463).

Because it takes a period of years to install all of the Machinery & Equipment to provide a new service, Bell must install the Machinery & Equipment to provide a new service prior to seeking PSC approval of the service (Tr. 447, 463-464).

Many of these vertical services offered by Bell were being sold in Missouri during the Tax Period. The dates on which such services were actually implemented in Missouri are shown in Exhibit 31, but virtually all of the most complex services were capable of creation for sale to customers by the system as of 1990 or 1991, even though they were in the approval process stated above (Tr. 174-175, 439-475; Ex. 31).

1. Description of Caller ID

A customer must first have either an adjunct device or a built-in telephone display to use Caller ID (Tr. 476-511; Ex. 14). While other parts of the network complete the telephone call as described above, the originating central office switch looks into its memory and sends, via the SS7 overlay network, both the called number and the calling number. The calling number is placed into a bit of memory associated with the called line. If the called customer has subscribed to Caller ID, the calling number information is transmitted from the terminating central office to the customer's phone between the first and second rings (Tr. 476-511; Ex. 14).

If the customer has also subscribed to the calling name delivery option of Caller ID, while the terminating central office sets up the call, that terminating central office will launch an additional query with the SS7 overlay network back through the STP to match a name with a calling number. The name is sent back by the SS7 network to the terminating office, which sends the information along with the calling number between the first and second rings as a coded bit of information, which is then displayed on the called customer's display device (Tr. 476-511; Ex. 14).

2. Description of Other Vertical Services Dependent upon SS7 Network

Anonymous Call Rejection is a vertical product connected with Caller ID. Persons may purposely block the delivery of their caller information for an individual call or for all calls. Anonymous call rejection permits the called customer to reject any calls from persons that block their caller information. When such a call arrives at the central office for a customer subscribing to Anonymous Call Rejection, it is rerouted to a recorded announcement stating that the called party does not accept anonymous calls. The called party's phone does not ring when such calls are rerouted (Tr. 465-470).

Auto Redial is a vertical product that permits a caller when receiving a busy signal to hang up and have the telephone network continue to monitor the called number. When the called number becomes idle, the network rings the calling and the called number without requiring the customer to redial the called number (Tr. 484).

Call Blocker is a vertical product that allows the customer to create a list of numbers from which the customer does not wish to receive calls. Any calls from a number subject to Call Blocker are rerouted to an announcement that the call has been blocked. The called party's phone does not ring when such calls are rerouted (Tr. 484-485).

Call Return is a vertical product that allows the customer to have the telephone network automatically call the last number that called the customer's number (Tr. 487).

Call Trace is a vertical product designed for cases in which the customer is receiving harassing phone calls. When the customer receives one of these calls, the customer may activate a code that records and prints the calling number at the telephone company's premises. The information is then given to law enforcement authorities (Tr. 488).

Priority Call is a vertical product that allows the customer to assign a distinctive ringing signal to certain incoming calls. The customer is assigned memory in the switching machine in which the customer may input numbers for which the customer desires distinctive rings. The network then uses the SS7 network to identify when these specific numbers are the calling numbers and gives the distinctive ring (Tr. 488-489).

Because Caller ID, Anonymous Call Rejection, Auto Redial, Call Blocker, Call Return, Call Trace and Priority Call all are dependent upon the network switches knowing the calling telephone

number, none of these services could be provided without the SS7 overlay network (Tr. 502, 626-655).

3. Description of Other Services Requiring Switching Memory

Call Forwarding is a vertical product that allows the customer to have calls that are originally directed to the customer's phone number automatically rerouted to another phone number. The customer inputs the phone number of the premise to which incoming calls will be rerouted from the customer's ordinary premises (Tr. 485-486).

Selective Call Forwarding is a vertical product that is a variation of Call Forwarding in which the customer directs that calls only from certain calling numbers be automatically rerouted to another phone number. No other calls will be rerouted from the customer's ordinary premises (Tr. 486, 503).

Remote Access to Call Forwarding is a vertical product used in conjunction with Call Forwarding that allows the customer to activate it from a remote location. The most common use of Remote Access to Call Forwarding is when the customer is already at the premise where the customer desires incoming calls to be forwarded (Tr. 487).

Call Waiting is a vertical product that allows the customer to be alerted by an audible tone of an incoming call when the customer is on another call. The customer then has the option of placing the original call on hold by pressing the switch hook and going to the incoming call. The customer then can go back and forth between both calls (Tr. 488).

Speed Call is a vertical product that allows the customer to create in the memory of the central office switch and store up to 32 telephone numbers which can be called using an abbreviated one or two digit code (Tr. 489-490).

Three-Way Calling is a vertical product that allows the customer to create a conference call. The customer connects with one person and then presses the switch hook to receive a second dial tone. The customer then connects with the other person and presses the switch hook to connect all three parties (Tr. 490).

4. Description of Billing and Miscellaneous Vertical Services

Bill Plus is a vertical product consisting of two parts. The first entails the collection of data from Bell's billing systems regarding the equipment, hardware and services a customer purchases as well as data from the system recording all calls charged to a customer. The data is collected and put on a disk (floppy or CD) and provided to the customer on a monthly basis. The second part of Bill Plus is specialized computer software that can be used on the customer's own computer to manipulate the data, including printing various graphs and reports, that allow the customer to analyze its bill in a more detailed form than Bell's regular bill (Tr. 448-449).

Customer Billing Report is a vertical product similar to Bill Plus. Customer Billing Report is run on Bell's, rather than the customer's, computer. The customer requests that its bill be analyzed in certain formats by Bell's computers and Bell provides the information in this format (Tr. 449-450).

CABS Bills on Floppy Disk is a vertical product that puts interchange carrier bills on floppy disks (Tr. 455).

Detailed Billing for Local Measured Service is a vertical product that provides billing information to customers whose service includes unlimited incoming calls but a limited number of outgoing calls at a flat monthly rate. All additional outgoing calls carry a charge and the Detailed Billing product identifies who was called and how much extra was billed for each such call (Tr. 450-451).

F. Bell's Accounting and the Claim for Refund

On July 26, 1995, Bell timely filed a claim for refund of Missouri use taxes paid on certain Machinery & Equipment it purchased (or placed in use in Missouri) during the Tax Period (Tr. 84-92; Ex. 6). The Machinery & Equipment for which the claim was requested was either purchased from out-of-state vendors for direct use in Missouri or held in inventory at Bell's Texas warehouse until used in Missouri (Tr. 116-190, Ex. 5, G-5). The basis of the claim was that the Machinery & Equipment established new or expanded existing manufacturing plants and/or was purchased to replace existing Machinery & Equipment by reason of design or product changes or materials and supplies used for the installation of Machinery & Equipment (Exs. 1, 6-8, 12-16 36, 38-40).

The amount of the claim for refund was determined, consistent with the theory of the refund, by including all purchases that had been placed in construction or "C" accounts under Federal Communications Commission ("FCC") Uniform System of Account ("USOA") guidelines (Tr. 87-88, 126-190; Ex. 6). Bell's purchases of Machinery & Equipment that had been placed in "C" accounts are demonstrated in the voluminous exhibits provided to the Commission (Exs. 9, 28-30). No purchases that had been placed in a maintenance or repair, "M" or "R," account under the USOA guidelines were included in the claim for refund (Tr. 126-190).

Ultimately, after correcting tax refund calculation errors, Bell claimed and claims a refund of \$601,404.46 in Missouri use tax remitted during the Tax Period (Tr. 165-66; Ex. 8). All of the purchases that are part of that claim were capitalized for accounting purposes (Tr. 274). All of those purchases were made (1) to provide new telephone service in locations where none had been provided before; or (2) to replace an existing piece of Machinery & Equipment because (a) a new or different service could not be produced with the old piece of Machinery & Equipment, or (b) because an

upgraded piece of Machinery & Equipment was necessary to increase the capacity of the system to serve more customers (Tr. 129-140, 268-297, 606-614; Ex. 22).

G. The Commission's Decision

The Commission concluded that basic telephone and vertical services were “products” within the meaning of §144.030.2(4) and (5). However, it concluded that “telephone service is not manufacturing” (L.F. 43). Thus, as a matter of law, the Commission concluded that taxpayers cannot manufacture those “products.”

The Commission rendered its conclusion because, in its opinion, basic telephone service was the mere transportation of electronic impulses (L.F. 41). It reasoned that, under traditional definitions for the manufacture of tangible products, the production equipment's output in the case of basic service was the same as its input (L.F. 41). The Commission then concluded that, because the production of basic service was not manufacturing, the production of vertical services was not manufacturing either because their production was merely “corollary to” the production of basic service (L.F. 43). In making the later conclusion, however, the Commission acknowledged that Bell's production of vertical services involved the transformation and creation of information and impulses (L.F. 44).

The Commission also determined that, as a matter of law, purchases of manufacturing equipment are not exempt under the Manufacturing Exemptions unless the products they are used to manufacture are in fact offered for sale during the tax period in which the purchases are made (L.F. 45).

Last, the Commission questioned whether certain minor material and supply purchases like labels, software, installation labor, and toilet paper, constituted supplies and materials used to install or construct the Machinery & Equipment (L.F. 46-47).³

³ The Commission's Finding of Fact 105 (L.F. 34) appears to list only those items that would normally be considered installation or construction materials or supplies. That list did not include the actual items of Machinery and Equipment that were constructed or installed. For instance, notably absent from the Commission's list are the numerous and expensive electronic switching devices.

STATEMENT OF THE ISSUES

Missouri law provides that *manufacturing* is the production of a product with a use, identity, and value different from the use, identity and value of the inputs. Bell takes raw electricity and electrical impulses and, by use of the Machinery & Equipment, transforms the electricity and electrical impulses into a new use, identity and value, namely digital electronic data that, when provided to customers, can be used for conversations with other telephone customers, identification of callers, rejection of certain calls, and various other vertical telephone products. Does Bell use the Machinery & Equipment to manufacture basic and vertical telephone services?

The Manufacturing Exemptions apply to the creation of intangible products. A product includes taxable services such as basic and vertical telephone services. Bell's Machinery & Equipment is directly used to create Bell's products. Does Bell's Machinery & Equipment manufacture basic and vertical telephone services within the meaning of the Manufacturing Exemptions?

Neither the Manufacturing Exemptions, nor any other provision of law, require expanded production or the completion of the design or product change occur during the tax period when the machinery and equipment is purchased. Do the Manufacturing Exemptions apply if machinery and equipment is purchased for the purpose of expanding production or implementing a product or design change, but the new products or expanded production are not realized until after the tax period when the machinery and equipment is purchased?

STANDARD OF REVIEW

The decision of the Commission shall be upheld if: (1) it is authorized by law; (2) it is supported by competent and substantial evidence upon the whole record; (3) no mandatory procedural safeguards are violated; and (4) the Commission, where it has discretion, exercises discretion in a way that is not

clearly contrary to the Legislature's reasonable expectations. Section 621.193; *Concord Publishing House, Inc. v. Director of Revenue*, 916 S.W.2d 186 (Mo. banc 1996). This Court's review of the law is *de novo*. *Zip Mail Services, Inc. v. Director of Revenue*, 16 S.W.3d 588, 590 (Mo. banc 2000).

POINT RELIED ON

THE ADMINISTRATIVE HEARING COMMISSION ERRED IN DENYING APPELLANT’S REFUND CLAIM BECAUSE, UNDER SECTIONS 621.189 AND 621.193, THAT DECISION IS NOT AUTHORIZED BY LAW OR SUPPORTED BY COMPETENT AND SUBSTANTIAL EVIDENCE IN THAT APPELLANT’S PURCHASES OF MACHINERY AND EQUIPMENT ARE EXEMPT FROM MISSOURI USE TAX UNDER SECTIONS 144.615(3) AND 144.030.2(4) AND (5) BECAUSE THE MACHINERY AND EQUIPMENT IS USED TO MANUFACTURE PRODUCTS WITHIN THE MEANING OF THOSE SECTIONS.

Bridge Data Co. v. Director of Revenue, 794 S.W.2d 204 (Mo. banc 1990);

DST Systems, Inc. v. Director of Revenue, SC 82797 (April 10, 2001);

International Business Machines Corporation v. Director of Revenue, 958 S.W.2d 554 (Mo. banc 1997);

Concord Publishing House, Inc. v. Director of Revenue, 916 S.W.2d 186 (Mo. banc .1996);

Floyd Charcoal Company, Inc. v. Director of Revenue, 599 S.W.2d 173 (Mo. 1980);

GTE Automatic Electric v. Director of Revenue, 780 S.W.2d 49 (Mo. banc 1989);

Heidelberg Central, Inc. v. Director of Revenue, 476 S.W.2d 502 (Mo. 1972);

Hogan Transports, Inc. v. Director of Revenue, No. 98-1305 RV (Mo. Admin. Comm. 1999);

Jackson Excavating v. Administrative Hearing Commission, 646 S.W.2d 48 (Mo. 1983);

K & A Litho Process, Inc. v. Director of Revenue, I653 S.W.2d 195 (Mo. banc 1983);

Noranda Aluminum, Inc. v. Missouri Dep’t of Revenue, 599 S.W.2d 1 (Mo. 1980);

West Lake Quarry & Material Company, Inc. v. Schaffner, 451 S.W.2d 140 (Mo. 1970);

Wetterau, Inc. v. Director of Revenue; 843 S.W.2d 365 (Mo. banc 1992);

Section 144.030.2(4);

Section 144.030.2(5);

Section 144.615(3);

Section 621.189;

Section 621.193;

12 CSR 10-3.326.

ARGUMENT

THE ADMINISTRATIVE HEARING COMMISSION ERRED IN DENYING APPELLANT’S REFUND CLAIMS BECAUSE, UNDER SECTIONS 621.189 AND 621.193, THAT DECISION IS NOT AUTHORIZED BY LAW OR SUPPORTED BY COMPETENT AND SUBSTANTIAL EVIDENCE IN THAT APPELLANT’S PURCHASES OF MACHINERY AND EQUIPMENT ARE EXEMPT FROM MISSOURI USE TAX UNDER SECTIONS 144.615(3) AND 144.030.2(4) AND (5) BECAUSE THE MACHINERY AND EQUIPMENT IS USED TO MANUFACTURE PRODUCTS WITHIN THE MEANING OF THOSE SECTIONS.

Introduction

Bell seeks a refund of \$601,404.46 in use tax remitted during the Tax Period on the purchases of Machinery & Equipment used to produce basic and vertical telephone services. During that same period, Bell collected and remitted \$11,011,655.48 in Missouri sales tax on its sales of basic and vertical telephone products produced with that and other Machinery & Equipment. As described in Bell’s statement of facts, Bell uses the Machinery & Equipment to manufacture basic and vertical telephone products. The record refutes the Commission’s characterization of Bell’s operations as merely transporting these products.

Section 144.020.1(2) imposes Missouri sales tax on the products that Bell produces. In *Bridge Data Company v. Director of Revenue*, 794 S.W.2d 204 (Mo. banc 1990), this Court first determined that the term “product,” as used in the Manufacturing Exemptions, was not limited to tangible personal property. See *International Business Machines Corporation v. Director of Revenue*, 958 S.W.2d 554, 557, n. 2 (Mo. banc 1997) (“IBM”). In *IBM*, this Court made it

abundantly clear that there is no requirement that a product be tangible to qualify for the Manufacturing Exemptions. *Id.* Therefore, this Court has already concluded that taxpayers can “manufacture” taxable services.

Not only does Bell clearly qualify for exemption under the plain terms of the Manufacturing Exemptions, but the application of those exemptions to Bell is entirely consistent with the policies underlying the Manufacturing Exemptions. One policy is to encourage production of taxable products. *IBM*, 958 S.W.2d at 558. With respect to the Tax Period, Bell sought a Missouri use tax refund of \$601,404.46 for its purchases of Machinery & Equipment to produce sales of products for which it remitted \$11,011,655.45 in Missouri sales tax. One other policy is to prevent the pyramiding of sale taxes inherent when tax is imposed on the machinery and equipment used to produce taxable products. *Floyd Charcoal Company, Inc. v. Director of Revenue*, 599 S.W.2d 173, 177 (Mo. banc 1980). Both policies are furthered by applying the Manufacturing Exemptions to Bell’s purchases of Machinery & Equipment.

Because of the integrated nature of Bell’s telephone system, Bell uses all of the Machinery & Equipment to produce basic telephone service as well as all of the vertical products. Because the Machinery & Equipment is used directly by Bell to manufacture products and was purchased to expand the manufacture of products or to produce new and redesigned products, Bell’s purchases of Machinery & Equipment are exempt under the Manufacturing Exemptions.

The Commission also erroneously concluded that the Manufacturing Exemptions did not, as a matter of law, apply unless the redesigned or new products were sold during the tax period when the Machinery & Equipment was purchased to implement the expansion or product redesign (L.F. 45). That proposition is not only contrary to *Concord Publishing House v. Director of Revenue*, 916

S.W.2d 186, 194 (Mo. banc 1996), but it also defies common sense. Indeed, the Commission had already acknowledged in *Hogan Transports, Inc. v. Director of Revenue*, No. 98-1305 RV (Mo. Admin. Hrg. Comm. 1999) that the purchases of Machinery & Equipment and the sales of new products need not occur during the same tax period.

A. Bell Manufactures Basic and Vertical Telephone Services

1. Elements of the Manufacturing Exemptions

During the Tax Period, Sections 144.030.2(4), 144.030.2(5) and 144.615(3), exempted from Missouri sales and use tax the following:

- (4) Machinery and equipment, and the materials and supplies solely required for the installation or construction of such machinery and equipment, replacing and used for the same purpose as the machinery and equipment replaced by reason of design or product changes, which is used directly for manufacturing or fabricating a product which is intended to be sold ultimately for final use or consumption;
- (5) Machinery and equipment, and the materials and supplies solely required for the installation or construction of such machinery and equipment, purchased and used to establish new or to expand existing manufacturing, mining or fabricating plants in the state if such machinery and equipment is used directly in manufacturing, mining or fabricating a product which is intended to be sold ultimately for final use or consumption.

In *Concord Publishing House*, 916 S.W.2d at 190, this Court distilled the elements of the Manufacturing Exemptions as follows:

Neither sales nor use tax is due on machinery and equipment (1) used directly for (2) manufacturing (3) a product which is intended to be sold ultimately for final use or consumption (4) if the machinery or equipment was purchased (a) to replace equipment by reason of design or product changes or (b) to expand existing manufacturing.

There is no dispute that basic and vertical telephone services are products ultimately sold for final use or consumption, and that the Machinery & Equipment was purchased for plant expansion and/or design or product changes (L.F. 48-49). Likewise, for the vast majority of purchases that remain at issue, all of which were capitalized, there is no dispute that the Machinery and Equipment constitute purchases of machinery, equipment, or materials and supplies required for the installation and construction of Machinery and Equipment. The only issue is whether the Machinery & Equipment is used in “manufacturing.”

2. The Production of Basic Telephone Service is Manufacturing

(a) *Bridge Data Controls*

This Court’s decision in *Bridge Data Company v. Director of Revenue*, 794 S.W.2d 204 (Mo. banc 1990), governs the disposition of whether the production of basic telephone services constitutes manufacturing. This Court’s decision in *Bridge Data* compels that production of basic telephone services constitutes “manufacturing” in the Manufacturing Exemptions.

In *Bridge Data*, the taxpayer obtained financial data and converted it into sophisticated business information for its customers. Specifically, the taxpayer took “raw” financial information

regarding trades in the financial markets and converted this raw data into usable forms for use by securities dealers in conducting financial transactions. This Court unanimously concluded that the Manufacturing Exemptions should be allowed for the taxpayer's hardware used in collecting financial data and transmitting it to its customers because the inputs were different than the outputs. *Id.* at

206. The Court noted that:

The taxpayer makes use of complicated and expensive equipment in providing data to its customers. The recognition of the manufacturing exemption represents a reasonable adoption of the statutes to processes which were not known or hardly known, at the time they were enacted. *Id.*

Consistent with the construction of “manufacturing” in *Bridge Data*, Bell’s production of basic telephone service “makes use of complicated and expensive equipment in providing [electrical impulses] to its customers[.]” The record demonstrates, and it is undisputed, that when providing basic telephone service, Bell’s telephone system does not transport a voice (sound waves). Instead, Bell converts one customer’s analog electrical impulses into digital electronic impulses and later converts those impulses into analog electronic impulses for the receiving customer.

Bell’s manufacturing is not unlike production of musical compact disks by a recording studio. The recording studio captures sounds generated by artists and creates digital signals intended to “mirror” the actual sounds onto a compact disc. Likewise, Bell takes sounds created by its customers and, through the use of its Machinery & Equipment, creates digital signals intended to “mirror” the sounds, and sends the digital signals to its customers in a form (analog signals) the customer can understand. There is little question that this Court would not seriously dispute that a recording studio is engaged in manufacturing. The only practical distinction between Bell and a recording studio is that the recording studio’s product is tangible, a distinction this Court rejected in *Bridge Data*. Therefore, this

Court's decision in *Bridge Data* compels the conclusion that the production of basic telephone service constitutes manufacturing.⁴

(b) The Commission's Reliance on *GTE* is Misplaced

In concluding that the basic telephone service was not manufactured, the Commission relied upon *GTE Automatic Electric v. Director of Revenue*, 780 S.W.2d 49 (Mo. banc 1989), *overruled International Business Machines Corporation v. Director of Revenue*, 958 S.W.2d 554, 557 (Mo. banc 1997) (“*IBM*”), and rejected by *Bridge Data*, 794 S.W.2d 206 (Mo. banc 1990) (L.F. 38-41). In *GTE*, a slim majority of this Court rejected a telephone company's argument that it was entitled to the Manufacturing Exemptions on the production of basic telephone service. The Court concluded that services were not “products:”

[The Missouri Legislature's] limitation of the [Manufacturing Exemptions] to equipment used to manufacture products must be read as specifically excluding equipment used in the telecommunications industry and other industries identified as services.... ***This conclusion disposes of appellants' first point relied on[.]***

GTE, 794 S.W.2d at 51.

In *dicta*, the majority also noted that the telephone company failed to show that “telecommunications constitutes manufacturing a product[.]” *Id.* A careful analysis of the *GTE*

⁴ As noted in this brief and the Commission trial record, some of the vertical products are in fact tangible.

majority's conclusion shows that it was also based upon a mistaken conclusion that a service cannot be a "product." In deciding that a "product" is synonymous only with "tangible personal property," the majority in *GTE* ostensibly relied on constructions of the term "manufacturing" in *West Lake Quarry & Material Co. v. Schaffner*, 451 S.W.2d 140, 143 (Mo. 1970) and *Heidelberg Central, Inc. v. Director of Revenue*, 476 S.W.2d 502, 506 (Mo. 1972) that "manufacturing" "takes something practically unsuitable for any common use and changes it so as to adopt it to such common use." The *GTE* majority concluded that the "telephone signal has no intrinsic value" because what really had value was "a service, not an end in itself." *GTE*, 794 S.W.2d at 51. The majority then compared the "telecommunications process" to its "description of a service as set forth in *K & A Litho Process, Inc. v. Director of Revenue*, 653 S.W.2d 195 (Mo. banc 1983)" and concluded that "[t]he signal cannot be considered a product with intrinsic value for purposes of tax law." *GTE*, 794 S.W.2d at 51. Last, the majority concluded that, unlike water in *Jackson Excavating*, the human voice was the "raw material" and it had broad common uses. *Id.*

In a strongly worded dissent, three dissenting judges in *GTE* disputed the majority's conclusion that a "product" is synonymous with "tangible personal property," *id.* at 53, and described the production of basic telephone service as follows:

The fact that the process begins and ends with the human voice (or the "talk" of computers) does not change the fact that the device producing the digital signal causes "a substantial transformation in quality and adaptability and creates an end product quite different from the original" *Jackson Excavating Co. v. Administrative Hearing Commission*, 646 S.W.2d 48, 51 (Mo. 1983).

To assume that these digital signals have no final use is to misunderstand the ubiquitous importance of telephonic communications in the modern world.

These electronic impulses have intrinsic and merchantable value and are the product of the transformation of a raw product—the human voice or the binary language of the computer—into forms suitable for new uses. They make computer networking, facsimile transmission and widespread business empires possible; they are vital to the smallest enterprise; these unseen oscillations stand ready to summon aid during the dark terror of an emergency; they are essential in ways too numerous to mention, too valuable to discount.

Id. at 54-55. The three judge minority opinion in *GTE* therefore concluded that basic telephone service was manufactured so as to qualify for the Manufacturing Exemptions. The dissenting opinion is cited with approval in *Bridge Data*, 794 S.W.2d at 206.

In summary, beginning with *Bridge Data* in 1990, this Court has made it abundantly clear that *services* can be ***manufactured products***. Since 1996, this Court has made clear that ***manufactured products*** include ***taxable services***. Section 144.020.1(4) imposes sales tax on the sale of telephone services. There is no clearer example of a taxable service than telephone service. If *Bridge Data* and *IBM* are to have any meaning, then the production of telephone services must be included within the definition of “manufacturing” for purposes of the Manufacturing Exemption even though the product is intangible.

3. The Production of Vertical Services is Manufacturing

This Court’s decisions in *Bridge Data*, *IBM*, *Concord*, and the recently *DST Systems Inc. v. Director of Revenue*, 43 S.W.3d 799 (Mo. banc 2001) (mainframe computers and other

equipment that were used to create printed products are eligible for the Manufacturing Exemptions) are instructive on the issue of whether the production of Bell's products constitute manufacturing. In each case, this Court concluded that organizing information constituted manufacturing.

The record reflects that Bell sells much more than basic telephone service. Exhibit 11 lists the various vertical services Bell offers: anonymous call rejection, auto redial, call blocker, call forwarding, selective call forwarding, remote access to call forwarding, call return, call trace, call waiting, caller ID, call waiting ID, call waiting ID options, priority call, speed calling, three-way calling, and billing services. Exhibits 14 and 40 explain how the Machinery & Equipment is used to produce these vertical services. *See also* (Tr. 476-511).

Unlike basic telephone service, it is Bell's equipment, and not the customers', that generates the electronic signals in the first instance in producing vertical services. For example, with caller ID, Bell's central office switching equipment recognizes information about the caller (name, number, and time), creates electronic signals representing that information, attaches the electronic signals containing that information to the call, and routes all of that information to the receiving customer between the first and second rings using SS7 (Tr. 476-511; Ex. 14). Bell uses both the SS7 signaling network and the computer processors in the sophisticated switching equipment for this purpose (Exh 14, 10-11). These processes are akin to organizing information.

Bell offers a number of "billing" vertical services as well. These types of service gather and provide information about the telephone usage of the customer and include: billed number frequencies, peak hour usages, traffic analysis bar graphs, long-distance carrier expense analysis, and customized reports and historical summaries (Ex. 40, p. 3). The information is provided to subscribing customers by modem, floppy disk or diskette. *Id.* These processes are also akin to organizing information.

Each of the above vertical services involves the processing of data and information and the sale of the resulting product to customers, some of which products are either printed documents, floppy disks, or CD ROMs. In accordance with *Bridge Data*, *IBM*, *Concord*, and *DST*, the equipment used for these functions is equipment directly used in manufacturing. All of the Machinery & Equipment is used to produce one or more of the vertical services, in addition to producing basic telephone services (Tr. 491, 504, 660-661).⁵

4. Each Purchase of Machinery & Equipment Is Part of Bell's Integrated Telecommunications System and is Used Directly to Provide Both Basic and Vertical Services in Final Form for Bell's Customers

In *Floyd Charcoal Co. v. Director of Revenue*, 599 S.W.2d 173 (Mo. 1980), this Court adopted the “integrated plant” theory for the manufacturing exemption. The Director argued in *Floyd Charcoal* that the manufacturing exemption applied only to items of Machinery & Equipment that produce a change in the composition of raw materials, and further argued that the test to be employed

⁵ The Commission explained that even if it concluded that the vertical services were manufactured, it was unable to determine which Machinery & Equipment were used to produce them (L.F. 44). That statement is not supported by the record; Mr. Deere testified that all of the Machinery & Equipment was required to provide the vertical services (Tr. 491, 504, 660-661) and the Director and her expert witness concurred in that “technical information” (Tr. 682).

was whether the operation could be carried on without the Machinery & Equipment in question. *Id.* at 178.

This Court flatly rejected that argument as too restrictive, given that the purpose of the manufacturing exemption was to increase Missouri manufacturing activity. Instead, it adopted the “integrated plant” theory in which Machinery & Equipment is exempt under the Missouri manufacturing exemption if it constitutes an integral part of the manufacturing process based upon the facts and circumstances of the particular business operation. *Id.* at 178. On the facts of *Floyd Charcoal*, this Court held that equipment used for weighing and sacking manufactured charcoal briquettes in a form for distribution and sale was exempt under the manufacturing exemption because the equipment was integral to the manufacturing operation.

On the same day that it decided *Floyd Charcoal*, this Court decided *Noranda Aluminum, Inc. v. Missouri Dep’t of Revenue*, 599 S.W.2d 1 (Mo. 1980). In *Noranda*, the equipment at issue was laboratory equipment used to monitor the process of producing aluminum and other metal materials to determine that the process was functioning properly and to determine whether the aluminum products had impurities. This Court held that the testing equipment was essential to and a part of the process of manufacturing aluminum. This Court determined, therefore, that the purchases of the equipment were exempt under the manufacturing exemption.

More recently, in *Concord Publishing House*, 916 S.W.2d 186 (Mo. banc 1996), this Court concluded that reporters’ laptop computers were directly used to manufacture newspapers despite the fact that the computers were used by reporters away from the newspaper’s central facility where the newspaper was printed. This Court rested its decision on the integrated plant theory.

In the present case, the purchases subject to the claim for refund are machinery and equipment (or supplies and materials solely used to install such machinery and equipment) that constitute an integral part of the provision of services through Bell's integrated telephone network (Ex. 36; Tr. 239-661, 273-274, 659-661).⁶ Bell's taxable products are basic telephone service and the numerous vertical services sold to its customers. Bell uses its integrated telephone network to produce its taxable services/products. That network consists of a multitude of Machinery & Equipment items, as described in the numerous exhibits in this matter (Exs. 8, 9(a)-(e), 28-30), that perform the operations and functions necessary to produce the products. As explained above, Bell uses that Machinery & Equipment to convert analog electronic signals into digital electronic signals, to extract and process information in order to provide the multitude of vertical services, and to transmit such information to its customers. Because each piece of Machinery & Equipment in Bell's network is part of an integrated telecommunications system and is used directly to provide both basic telephone services and one or more vertical services in their final form for Bell's customers, all of the Machinery & Equipment is

⁶ The Commission questioned whether minor purchases such as software, toilet paper, and labels qualified (L.F. 47). Those items were obviously directly used to manufacture the products (in the case of software) or were used by workers to install or construct other equipment (in the case of labels and toilet paper). Mr. Deere provided lengthy testimony that all of the purchases at issue were machinery, equipment or materials and supplies (Tr. 239-661) and the Director conceded the accuracy of that technical information (Tr. 682). In any event, to the extent this Court questions whether any such purchase qualifies, the record is sufficient to make the necessary calculations of the refund (Exs. 8, 9 (a-e), 28-30).

exempt from use tax.

**B. The Manufacturing Exemptions do not Require Taxpayers to Sell
Manufactured Products During the Tax Periods When the Machinery
& Equipment is Purchased**

The Commission concluded that it could not consider four of seventeen of the vertical services that the Machinery & Equipment were designed to manufacture because those four services were not sold during the Tax Period (L.F. 45; Ex. 31).

Exhibit 31 lists the dates when the vertical services were offered in Missouri. Most of these services were offered prior to the Tax Period but a few, like Caller ID, were not offered in Missouri until shortly after the Tax Period. Before Bell could offer its vertical services, including Caller ID, it had to install the necessary Machinery & Equipment, test the service, and apply for and obtain approval of the Missouri Public Service Commission to offer and charge for that service (Tr. 446-447, 463-464, 502).⁷

The Commission's limitation of the Manufacturing Exemptions is not reasonable or practical. Manufacturers cannot be expected to offer their redesigned products at the same time that they are implementing the product design changes by installing the necessary machinery and equipment. It is

⁷ Because all of the Machinery & Equipment is used to produce all of Petitioner's vertical services as well as basic telephone service, if Petitioner uses the Machinery & Equipment to manufacture even one such service, all of the Machinery & Equipment is exempt under the Manufacturing Exemptions.

unrealistic to expect a taxpayer that reports on a quarterly basis to completely construct whole manufacturing plants in a quarter so as to be able to qualify for the new plant manufacturing exemption.

Indeed, in *Concord*, the Director made a similar argument that this Court soundly rejected. The Director argued that the design change (to that of a pagination newspaper printing operation) had not been implemented until a year after the audit period when the machinery and equipment had been purchased. This Court concluded that the language of the exemptions—“by reason of design or product changes”—expressed the legislative intent that the “purpose of” the purchase was determinative. “The Statute does not specify when the equipment must be used, only that it is used in an exempt manner.” *Id.* at 191. This Court then concluded that the “common sense” construction of the exemptions meant that “[i]t is unreasonable to expect all businesses to pay for and make major production changes all in one tax year in order to qualify for the exemption.”⁸ The Court also noted that the Director’s position, and that of the Commission here, was also contrary to the Director’s regulation 12 CSR 10-3.320(4)(B)(1). *Id.* In recognition of this fact, the Commission itself has already accepted Bell’s position in this regard in *Hogan Transports, Inc. v. Director of Revenue*, No. 98-1305 RV (Mo. Admin. Hrg. Comm. 1999).

While exemption statutes are generally construed against the taxpayer, exemptions are to be given a reasonable, natural, and practical interpretation in light of modern circumstances. *Wetterau, Inc. v. Director of Revenue*, 843 S.W.2d 365 (Mo. banc 1992). The reasonable and practical

⁸ In this case, Bell reports its tax on a monthly basis. It is even more unreasonable to expect Bell to implement major product or design changes in one month.

interpretation is to consider the production of all vertical services, including the four vertical services not sold until shortly after the Tax Period. The Commission erred in its refusal to consider the manufacture of new products like Caller ID simply because those products were not offered during the Tax Period.

CONCLUSION

Based on the foregoing, Bell respectfully requests that this Court reverse the Commission and remand with instructions to sustain Bell's refund claim.

Respectfully Submitted,

BRYAN CAVE LLP

Juan D. Keller, #19864
B. Derek Rose, #44447
One Metropolitan Square
211 North Broadway, Suite 3600
St. Louis, Missouri 63102
Telephone: (314) 259-2000
Facsimile: (314) 259-2020

Edward F. Downey, #28826
221 Bolivar Street, Suite 101
Jefferson City, Missouri 65101
Telephone: (573) 556-6622
Facsimile: (573) 556-6620

ATTORNEYS FOR APPELLANT

CERTIFICATE OF SERVICE

I hereby certify that two true and accurate copies of the foregoing, as well as a labeled disk containing the same, were mailed first class, postage prepaid or hand-delivered this _____ day of October 2001, to Deputy State Solicitor Alana Barragan-Scott, P.O. Box 899, Jefferson City, Missouri 65102.

CERTIFICATE REQUIRED BY SPECIAL RULE 1(C)

I hereby certify that the foregoing brief includes the information required by Supreme Court Rule 55.03 and complies with the limitations contained in Supreme Court Special Rule 1(b). The foregoing brief contains 11,936 words.

The undersigned further certifies that the disk simultaneously filed with the briefs filed with this Court under Supreme Court Rule 84.05(a) has been scanned for viruses and is virus-free.
